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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,246	12/17/2001	Ajith Kuttannair Kumar	20-LC-5014(320)	6291

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EXAMINER

KIM, CHONG HWA

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 02/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/023,246

Applicant(s)

KUMAR ET AL.

Examiner

Chong H. Kim

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4,7 and 17-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,7,17-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____                                                            | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Nov 26, 2003 has been entered.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Lounsberry, III et al., U.S. Patent 4,856,617.

Lounsberry shows, in Figs. 1-5, a wayside rail lubrication apparatus for applying lubrication for the passage of train having one or more locomotives constituting a consist pulling a plurality of load cars along the rails, the apparatus comprising;

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a sensor S associated with a first position along the rails for producing a lubrication signal when a locomotive pulling a plurality of load cars passes the first position;

a lubricant dispensing apparatus 10 for applying a lubricant to the rail at a second position (located at the top portion of the rail as shown in Fig. 1 if the direction of the train is toward the bottom of the drawing) on the rail in response to the lubrication signal, the lubricant adapted to reduce the friction between wheels of the load cars and the rail, the first position and the second position being separated by a distance along the rail with the first position being farther along the rail in a direction of movement of the locomotive relative to the second position, the distance being sufficient to prevent the lubricant from contacting any drive wheel of the locomotive consist (as described in column 6 lines 4-25), whereby friction at the rail is reduced for the load cars of the train without loss of tractive effort of the locomotive consist on the rails;

the lubricant dispensing apparatus further comprising a lubricant container R for storing a volume of lubricant, a pump P for delivering lubricant from the lubricant container to the rail, and a refilling device (inherent) for adding lubricant to the lubricant container at no more than a predetermined rate so that lubricant available for application over a predetermined period of time is limited;

a bypass device (microprocessor) for selectively preventing the lubricant dispensing apparatus from applying the lubricant in response to the lubrication signal (as described in column 6 lines 4-25); and

a controller (microprocessor) for terminating the application of the lubricant to the rail by the lubricant dispensing apparatus before a number of the load cars at a rear of the train pass the second position (as described in column 6 lines 20-25).

4. Claim 17 is rejected under 35 U.S.C. 102(e) as being anticipated by Kumar, U.S. Patent 6,585,085.

Kumar shows, in Figs. 1-6, and discloses in Abstract, a method of applying lubricant to a rail for lubricating the rail for the passage of a succession of trains along the rail, the method comprising;

applying lubricant to a rail at a first time in response to the presence of a first train at a location along the rail;

sensing the presence of a second train at the location at a second time; and

applying lubricant to the rail in response to the presence of the second train at the location, with the quantity of lubricant applied at the second time being responsive to the time span between the first and second times.

5. Claims 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumar, U.S. Patent 6,585,085.

Kumar shows, in Figs. 1-6, and discloses in Abstract, a method of applying lubricant to a rail for lubricating the rail for the passage of trains each having one or more locomotives constituting a consist, the consist located at a head of train at a leading end of the train, and an end of train at a trailing end of the train as the train travels along the rail, the method comprising;

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sensing the presence of a train on a rail;

applying a lubricant to a section of the rail in response to the presence of the train after the consist at the head of the train has passed the section of rail;

determining an end of train location relative to the section of rail (inherent since the sensor 18 detects or determines the presence of the wheels);

terminating the application of the lubricant to the section of rail before an end of the train passes the section of rail so that the quantity of lubricant on the section of rail is dissipated by wheels of a plurality of cars proximate the end of the train (as described in column 4, lines 35-48);

detecting the end of the train proximate a position of the rail a predetermined distance from a position of a lubricant applicator; and

terminating application of the lubricant by the lubricant applicator in response to the detection of the end of the train.

6. Claims 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumar, U.S. Patent 6,585,085.

Kumar shows, in Figs. 1-6, a wayside rail lubrication apparatus comprising;

a detection apparatus 9-11 generating a lubrication signal in response to the presence of a train on a rail;

a lubricant dispensing apparatus 12 applying lubricant to the rail in response to the lubrication signal;

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a timing apparatus 20 producing a timed delay between the generation of the lubricating signal and the application of the lubricant (as described in column 4, lines 9-12; column 5, line 14 and lines 65-67);

a train speed input to the timing apparatus for making the timed delay responsive to a speed of the train; and

a locomotive parameter input to the timing apparatus for making the timed delay responsive to one of the group of a size of a locomotive and a number of locomotives (as described in column 4 lines 3-17).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lounsberry, III et al. in view of Effmert et al., DE 195549219C.

Lounsberry shows, in Figs. 1-5, a wayside rail lubrication apparatus for lubricating rails for the passage of trains along the rails, the apparatus comprising;

a detection apparatus S for providing a lubrication signal in response to the presence of a train on a rail adjacent the detection apparatus;

a lubricant dispensing apparatus 10 for applying a lubricant in response to the lubrication signal to reduce friction of the train on the rails;

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a bypass device (TEST) for selectively preventing operation of the lubricant dispensing apparatus in applying the lubricant in response to the lubrication signal under circumstances in which the addition of lubricant is undesirable;

but fails to show the bypass device being wireless communication receiver for receiving a signal from a transmitter located on a train.

Effmert et al. discloses, in Abstract, a lubrication system comprising the bypass device 40 having a communication device (transponder) located on the vehicle from controlling the bypass device from the vehicle.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made modify the bypass device of Lounsberry with the bypass device having the remote communication device as taught by Effmert et al. in order to provide a more reliable lubrication system wherein unnecessary lubrication on the rail can be reduced.

9. Claims 7 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar. in view of Effmert et al., DE 195549219C.

Kumar shows, in Figs. 1-6, a wayside rail lubrication apparatus for lubricating rails for the passage of trains along the rails, the apparatus comprising;

a detection apparatus 9-11 for providing a lubrication signal in response to the presence of a train on a rail adjacent the detection apparatus;

a lubricant dispensing apparatus 12 for applying a lubricant in response to the lubrication signal to reduce friction of the train on the rails;



a bypass device 20 for selectively preventing operation of the lubricant dispensing apparatus in applying the lubricant in response to the lubrication signal under circumstances in which the addition of lubricant is undesirable;

but fails to show the bypass device being wireless communication receiver for receiving a signal from a transmitter located on a train.

Effmert et al. discloses, in Abstract, a lubrication system comprising the bypass device 40 having a communication device (transponder) located on the vehicle from controlling the bypass device from the vehicle.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made modify the bypass device of Kumar with the bypass device having the remote communication device as taught by Effmert et al. in order to provide a more reliable lubrication system wherein unnecessary lubrication on the rail can be reduced.

#### ***Allowable Subject Matter***

10. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

11. Applicant's arguments with respect to claims 1-4 and 7 have been considered but are moot in view of the new ground(s) of rejection.

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12. In response to the applicant's argument that Kumar fails to show the limitation as recited in claim 17, it is the Examiner's view that the limitation concerning the lubricant being applied in responsive to the time span between the first and second time is shown by Kumar. It may be that Kumar fails to specifically describe such limitation, but is the Examiner's position that such limitation involves a mere inherent nature of the method involving the application of lubricant with sensors and microprocessor in which Kumar utilizes. It is inherent that there is more than one train. It is inherent that there is a time span between the first train and the second train. Therefore, the sensor sensing the trains will experience the time span between the first and second trains. Thus it can be construed that the lubricant applied at the second train is responsive to the time span between the first and second train.

13. In response to the applicant's argument that Kumar fails to show the limitation as recited in claim 19, Kumar discloses, in column 4, lines 35-48, specifically, in lines 40-41, that the "set of spray shots may be made on the lead wheel of the trailing truck." The above statement suggests that the lubricant on the rail would be enough to be dissipated by the following wheels at the end of the train.

14. In response to the applicant's argument concerning the limitations as recited in claim 20, it would be inherent in Kumar to teach such limitations. Since Kumar involves sensors and microprocessor to control the application of the lubricant, it would be inherent to detect the end of the train proximate a position of the rail a predetermined distance from a position of a lubricant applicator and terminate application of the lubricant by the lubricant applicator in response to the detection of the end of the train.

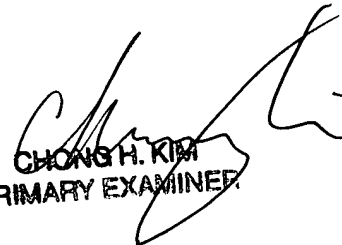
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (703) 305-0922. The examiner can normally be reached on Tuesday - Friday; 8:00 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on (703) 308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

chk  
January 30, 2004

  
CHONG H. KIM  
PRIMARY EXAMINER